Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1 (currently amended). A device for photodynamic stimulation of human cells, comprising:

a base housing containing a control mechanism and a pulse generator; and

at least one applicator equipped with at least one pulsed first light source connected to said pulse generator;

wherein:

the generator is configured to selectably supply electrical pulses at a frequency between 200 and 20,000 Liz., a pulse length between 2 and 200 microseconds, and an amplitude of between 2 and 25 volts; ~~and~~

the at least one first light source is a semiconductor diode which emits light of approximately 600, 900, and 1200 nanometers ~~wavelength~~ in response to said pulses from said generator; and

wherein the at least one applicator comprises sensors connected to the control mechanism for measurement of reflected light for feedback control and automatic adjustment.

2 (original). A device according to claim 1, wherein at least one of the first light sources is a semiconductor diode which emits blue-light radiation in the range of 350 to 500 nanometers.

3 (original). A device according to claim 1, wherein at least one of the first light sources is a tube which emits blue-light radiation in the range of 350 to 500 nanometers.

4. (cancelled)

5 (original). A device according to claim 1, wherein the at least one applicator is mounted to the base housing by means of a movable-joint arm.

6 (original). A device according to claim *5,* wherein the at least one applicator comprises several single applicators hinged together so as to be adjustable at angles with respect to one another.

7 (original). A device according to claim 1, further comprising a hand-held applicator comprising at least one second light source connected to said pulse generator and at least one light outlet.

8 (original). A device according claim 7 wherein the hand-held applicator is equipped with a shaft and a head and a printed circuit board equipped with semiconductor diodes.

9 (original). A device according to claim 7 wherein the at least one light outlet is equipped with a mounted lens.

10 (original). A device according to claim 8 wherein:

at least a first semiconductor diode on the printed circuit board radiates red and infrared light at wavelengths of approximately 600, 900, and 1200 nanometers;

at least a second semiconductor diode on the printed circuit board radiates blue light in the range of approximately 350 to 500 nanometers;

the head comprises an expander rotatable to selectably conduct blue light or red and infrared light to said at least one light outlet.

11(original) . A device according to claim 10, wherein the expander includes a fiber optic cable.

12 (original). A device according to claim 10, wherein the light output is at approximately 25% of a selected level for approximately 10 seconds and is at the selected level thereafter.

13 (original) . A method of treating tissue, comprising the steps of:

introducing a photosensitive substance to the tissue;

determining when the tissue has absorbed a predetermined level of the photosensitive substance; and

irradiating the tissue with a device according to claim 1.

14 (original) . A method according to claim 13, wherein the step of introducing a photosensitive substance to the tissue comprises topical application of a lotion containing the photosensitive substance.

15 (original) . A method according to claim 13, wherein the step of introducing a

photosensitive substance to the tissue comprises oral ingestion of a substance comprising at least the photosensitive substance.

16 (original). A method according to claim 13, wherein the step of introducing a photosensitive substance to the tissue comprises subcutaneous injection of a substance comprising at least the photosensitive substance.

17 (original). A method according to claim 13, wherein the photosensitive substance is one of photofrin, 5-aminolevulan acid, hermatoporphyrin, verteporfin, chlorins, phthaldodyanines, phenothiazine, benzoporpliyrin-derivative monoacid-A (ATMPn), L-Phenylalanin, and ammi visnaga.

18 (original). A method according to claim 13, wherein dimethylsulfoxide is also introduced to the tissue.

19 (original). A method according to claim 13, wherein dimethylsulfoxide is mixed with the photodynamic substance.

20 (original). A method according to claim 13, wherein:

the photosensitive substance is photofrin;

the photosensitive substance is introduced to the tissue of a patient by subcutaneous injection of 1 to 2 mg. per kg. of the patient's weight;

the patient is kept in dim light for approximately 48 hours before irradiation; and

the patient is kept out of strong light for approximately eight weeks after irradiation.

21 (original). A method according to claim 13, wherein:

the photosensitive substance is 5-Aminolavulin acid;

the photosensitive substance is introduced to the tissue of a patient by topical application of a 10 to 20 percent mixture in one of an oil-in-water emulsion and a cream;

the patient is kept in dim light for approximately six hours before irradiation; and

the patient is kept out of strong light for approximately 48 hours after irradiation.

22 (original). A method according to claim 13, wherein:

the photosensitive substance is L-Phenylalanin;

the photosensitive substance is introduced to the tissue of a patient by topical application of a 5 to 30 percent mixture according to a degree of treatment desired; and

the patient is kept out of strong light for approximately 24 hours after application.

23 (original). A method according to claim 13, wherein:

the photosensitive substance is L-Phenylalanin;

the photosensitive substance is introduced to the tissue of a patient by oral ingestion of 50 to 100 mg according to the patient's weight and to degree of treatment desired;

the patient is kept in dim light for approximately 60 minutes before irradiation; and

the patient is kept out of strong light for approximately 24 hours after application.

24 (original) . A method according to claim 13, wherein:

the photosensitive substance is amxni visnaga;

the photosensitive substance is administered to the tissue of a patient by topical application of a 5 to 30 percent mixture, according to degree of treatment desired, in a liquid medium;

the patient avoids direct sunlight for approximately 30 minutes before irradiation; and

the patient avoids sunbathing for approximately five days after irradiation.

25 (original). A method according to claim 13, wherein:

the photosensitive substance is ammi visnaga;

the photosensitive substance is administered to the tissue of a patient by oral ingestion of approximately 100 mg. thereof;

the patient avoids direct sunlight for approximately three hours before irradiation; and

the patient avoids sunbathing for approximately five days after irradiation.

26 (original). A method according to claim 13, wherein the step of determining when the tissue has absorbed a predetermined level of the photosensitive substance comprises observing that the tissue undergoes a predetermined color change when viewed under a predetermined illumination.

27 (original). A method according to claim 26, wherein the predetermined illumination comprises a wood lamp.

28 (original). An apparatus according to claim 1, wherein the pulse duration is limited to

20 microseconds.

29 (original) . A method according to claim 13, wherein the pulse duration is limited to 20 microseconds.

30 (currently amended). A device for photodynamic stimulation of human cells, comprising:

a base housing containing a control mechanism and a pulse generator; and

at least one applicator equipped with at least one pulsed first light source connected to said pulse generator;

wherein:

the generator is configured to selectably supply electrical pulses at a frequency between 200 and 20,000 Hz., a pulse length between 2 and 200 nanoseconds, and an amplitude of between 40 and 400 volts; ~~and~~

the at least one first light source is a laser diode which emits light of approximately 600, 900, and 1200 nanometers ~~wavelength~~ in response to said pulses from said generator; and

wherein the at least one applicator comprises sensors connected to the control mechanism for measurement of reflected light for feedback control and automatic adjustment.

31 (original). A device according to claim 30, wherein at least one of the first light sources is a laser diode which emits blue-light radiation in the range of 350 to 500 nanometers.

32 (original). A device according to claim 30, wherein at least one of the first light

sources is a tube which emits blue-light radiation in the range of 350 to 500 nanometers.

33. (cancelled)

34 (original). A device according to claim 30, wherein the at least one applicator is mounted to the base housing by means of a movable-joint arm.

35 (original). A device according to claim 34, wherein the at least one applicator comprises several single applicators hinged together so as to be adjustable at angles with respect to one another.

36 (original). A device according to claim 30, further comprising a hand-held applicator comprising at least one second light source connected to said pulse generator and at least one light outlet.

37 (original). A device according claim 36 wherein the hand-held applicator is equipped with a shaft and a head and a printed circuit board equipped with laser diodes.

38 (original). A device according to claim 36 wherein the at least one light outlet is equipped with a mounted lens.

39 (original). A device according to claim 37 wherein:

at least a first laser diode on the printed circuit board radiates red and infrared light at

wavelengths of approximately 600, 900, and 1200 nanometers;

at least a second laser diode on the printed circuit board radiates blue light in the range of approximately 350 to 500 nanometers;

the head comprises an expander rotatable to selectably conduct blue light or red and infrared light to said at least one light outlet.

40 (original). A device according to claim 39, wherein the expander includes a fiber optic cable.

41 (original). A device according to claim 39, wherein the light output is at approximately *25%* of a selected level for approximately 10 seconds and is at the selected level thereafter.

42 (original). A method of treating tissue, comprising the steps of:

introducing a photosensitive substance to the tissue;

determining when the tissue has absorbed a predetermined level of the photosensitive substance; and

irradiating the tissue with a device according to claim 30.

43 (original). A method according to claim 42, wherein the step of introducing a photosensitive substance to the tissue comprises topical application of a lotion containing the photosensitive substance.

44 (original). A method according to claim 42, wherein the step of introducing a photosensitive substance to the tissue comprises oral ingestion of a substance comprising at least the photosensitive substance.

45 (original). A method according to claim 42, wherein the step of introducing a photosensitive substance to the tissue comprises subcutaneous injection of a substance comprising at least the photosensitive substance.

46 (original). A method according to claim 42, wherein the photosensitive substance is one of photofrin, 5-aminolevulan acid, hermatoporphyrin, verteporfin, chlorins, phthaldodyanines, phenothiazine, benzoporphyrin-derivative monoacid-A (ATMPn), L-Phenylalanin, and ammi visnaga.

47 (original). A method according to claim 42, wherein dimethylsulfoxide is also introduced to the tissue.

48 (original). A method according to claim 42, wherein dimethylsulfoxide is mixed with the photodynamic substance.

49 (original). A method according to claim 42, wherein:

the photosensitive substance is photofrin;

the photosensitive substance is introduced to the tissue of a patient by subcutaneous injection of 1 to 2 mg. per kg. of the patient's weight;

the patient is kept in dim light for approximately 48 hours before irradiation; and

the patient is kept out of strong light for approximately eight weeks after irradiation.

50 (original). A method according to claim 42, wherein:

the photosensitive substance is 5-Aminolavulin acid;

the photosensitive substance is introduced to the tissue of a patient by topical application of a 10 to 20 percent mixture in one of an oil-in-water emulsion and a cream;

the patient is kept in dim light for approximately six hours before irradiation; and

the patient is kept out of strong light for approximately 48 hours after irradiation.

51 (original). A method according to claim 42, wherein:

the photosensitive substance is L-Phenylalanin;

the photosensitive substance is introduced to the tissue of a patient by topical application of a S to 30 percent mixture according to a degree of treatment desired; and

the patient is kept out of strong light for approximately 24 hours after application.

52 (original). A method according to claim 42, wherein:

the photosensitive substance is L-Phenylalanin;

the photosensitive substance is introduced to the tissue of a patient by oral ingestion of 50 to 100 mg according to the patient's weight and to degree of treatment desired;

the patient is kept in dim light for approximately 60 minutes before irradiation; and

the patient is kept out of strong light for approximately 24 hours after application.

53 (original). A method according to claim 42, wherein:

the photosensitive substance is ammi visnaga;

the photosensitive substance is administered to the tissue of a patient by topical application of a *5* to 30 percent mixture, according to degree of treatment desired, in a liquid medium;

the patient avoids direct sunlight for approximately 30 minutes before irradiation; and

the patient avoids sunbathing for approximately five days after irradiation.

54 (original). A method according to claim 42, wherein:

the photosensitive substance is ammi visnaga;

the photosensitive substance is administered to the tissue of a patient by oral ingestion of approximately 100 mg. thereof;

the patient avoids direct sunlight for approximately three hours before irradiation; and the patient avoids sunbathing for approximately five days after irradiation.

55 (original). A method according to claim 42, wherein the step of determining when the tissue has absorbed a predetermined level of the photosensitive substance comprises observing that the tissue undergoes a predetermined color change when viewed under a predetermined illumination.

56 (original). A method according to claim *56,* wherein the predetermined illumination comprises a wood lamp.

57 (original). An apparatus according to claim 30, wherein the pulse duration is limited to 20 nanoseconds.

58 (original). A method according to claim 42, wherein the pulse duration is limited to 20 nanoseconds.